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By: Nancy Ramos Printed: Nancy Ramos

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Kaser et al.

Title: POLYCYCLIC AROMATIC HYDROCARBON INDUCED MOLECULES

Serial No.: To Be Assigned Filing Date: Herewith

Examiner: To Be Assigned Group Art Unit: To Be Assigned

Official Draftsman

Commissioner for Patents
Washington, D.C. 20231

SUBMISSION OF FORMAL DRAWINGS

Sir:

Transmitted herewith are Figure(s) 1A, 1B, 1C, 1D, 1E, 1F, 2A, 2B, 2C, 3, 4, as Eleven (11) sheets of formal drawings for this application. Each sheet of drawing indicates the identifying indicia suggested in 37 CFR Section 1.84(c) on the reverse side of the drawings.

Applicants believe that no fee is due with this paper. However, if the Commissioner determines that a fee is necessary, the Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. **09-0108**. A duplicate copy of this communication is enclosed.

If there are any questions regarding the above, the Examiner is invited to call the undersigned at 650-855-0555.

Respectfully submitted,

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5'	CTTCA	GTT	CCT	CGA	AGA	GAT	TCA	CTT	TCA	AAA	ACA	TCA	ACT	CCT	TAT	AAC	AAA	TCA	
	11		20		29					38					47		56		
	65		74		83					92					101		110		
	AAC	AAA	GCA	GCA	AGC	CAA	CAA	GGG	ACC	CCA	TGG	GAA	ACA	CTT	GTC	GTG	TTT	GCT	
	ATC	AAC	TTG	AAG	CAA	TTA	AAC	GTT	CAA	ATG	AAT	ATG	AGT	AAT	GTA	ATG	GGA	AAT	
	T	T	W	T	T	S	G	L	K	S	Q	G	R	L	S	V	M	N	
	ACA	ACT	TGG	ACA	ACT	AGT	GGT	TTG	AAG	AGC	CAG	GCG	CGT	CTG	TCA	GTA	GGA	AGT	
	173		182		137				191			200			209			218	
	AAT	CGT	GAT	CGA	GAG	ATC	AGC	ATG	TCT	GTT	GGT	CTG	GGA	AGA	TCA	CAA	TTA	GAT	
	N	R	D	R	E	I	S	M	S	V	G	L	G	R	S	Q	L	D	
	227		236		245							254			263			272	
	TCT	AAA	GGA	GGA	GTA	GTT	GGA	GGG	ACC	ATA	GAT	GTC	AAT	GCT	TTG	GAG	ATG	GTT	
	S	K	G	G	V	V	G	G	T	I	D	V	N	A	L	E	M	V	
	281		290		299					308			317			326			
	GCT	CAT	ATT	TCT	GAA	CAT	CCA	AAT	CAG	CAA	CCC	AGT	CAC	AAA	ATT	CAG	ATT	ACT	
	A	H	I	S	E	H	P	N	Q	Q	P	S	H	K	I	Q	I	T	
	335		344		353							362			371			380	
	ATG	GGT	TCT	ACT	GAA	GCT	CGT	GTT	GAT	TAC	ATG	GGC	TCA	AGT	ATC	CTC	ATG	GGC	
	M	G	S	T	E	A	R	V	D	Y	M	G	S	S	I	L	M	G	

FIGURE 1A

APPLICANT	NAME
ADDRESS	ADDRESS
TELEPHONE	TELEPHONE
SUBCLASS	

DRAFTS

ATC	TTC	AGT	AAT	GCT	GAT	CTT	AAG	CTT	CAG	GAT	GAA	TGG	AAA	GTA	AAC	TTG	TAT	488
I	F	S	N	A	D	L	K	L	Q	D	E	W	K	V	N	L	Y	
497		506		515		524		533		542								
AAT	ACA	TTG	GAT	TCA	AGC	ATA	ACT	GAT	AAA	ACT	GAG	ATT	TTC	GTC	CAT	GGA	GAT	
N	T	L	D	S	S	I	T	D	K	S	E	I	F	V	H	G	D	
551		560		569		578		587		596								
TTG	AAG	TGG	GAT	ATT	TTC	CAA	GTA	ATG	ATA	TCA	AGG	TCA	ACC	ACA	CCA	GAT	CTG	
L	K	W	D	I	F	Q	V	M	I	S	R	S	T	T	P	D	L	
605		614		623		632		641		650								
ATA	AAA	ATA	GGA	ATG	AAG	CTC	CAG	GAA	TTT	TTC	ACA	CAA	CAA	TTT	GAT	ACC	AGC	
I	K	I	G	M	K	L	Q	E	F	F	T	Q	Q	F	D	T	S	
659		668		677		686		695		704								
AAA	CGA	GCT	CTG	TCT	ACC	TGG	GGA	CCA	GTT	CCT	TAC	CTT	CCG	CCA	AAG	ACA	ATG	
K	R	A	L	S	T	W	G	P	V	P	Y	L	P	P	K	T	M	
713		722		731		740		749		758								
ACT	AGC	AAC	CTA	GAA	AAA	AGT	TCA	CAA	GAA	CAA	TAA	CTT	GAT	GCA	GCA	CAT	CAT	
T	S	N	L	E	K	S	S	Q	E	Q	L	L	D	A	A	H	H	
767		776		785		794		803		812								
CGA	CAC	TGG	CCT	GGA	GTA	TTG	AAG	GTG	GTA	TCA	GGA	TGG	CAC	ATA	TCC	TTA	TTT	
R	H	W	P	G	V	L	K	V	V	S	G	C	H	I	S	L	F	
821		830		839		848		857		866								
CAG	ATT	CCA	TTA	CCA	GAA	GAT	GGA	ATG	CAA	TTT	GGA	GGA	TCA	ATG	AGC	TTA	CAT	
Q	I	P	L	P	E	D	G	M	Q	F	G	G	S	M	S	L	H	

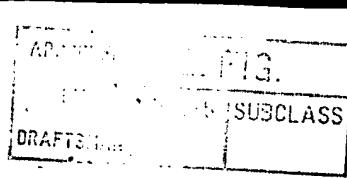
FIGURE 1B



TESTING WITH E. coli

875	GGA	AAT	CAT	ATG	ACA	CTG	GCA	TGT	TTT	CAT	GGT	CCA	AAT	TTT	CGT	TCA	AAA	TCT	920
	G	N	H	M	T	L	A	C	F	H	G	P	N	F	R	S	K	S	
929	TGG	GCC	CTT	TTT	CAT	TTA	GAA	GAA	CCA	AAT	ATT	GCT	TTT	TGG	ACT	GAA	GCT	CAG	974
	W	A	L	F	H	L	E	E	P	N	I	A	F	W	T	E	A	Q	
983	AAA	ATC	TGG	GAA	GAT	GCC	TCC	AGT	GAT	CAT	TCT	ACA	TAT	ATT	GTA	CAA	ACA	CTA	
	K	I	W	E	D	G	S	S	D	H	S	T	Y	I	V	Q	T	L	
1037	GAT	TTT	CAC	CTG	GGT	CAT	AAT	ACT	ATG	GTT	ACC	AAA	CCA	TGT	GGT	GCT	TTG	GAA	1028
	D	F	H	L	G	H	N	T	M	V	T	K	P	C	G	A	L	E	
1046	AGT	CCT	ATG	GCA	ACA	ATA	ACC	AAG	ATA	ACA	AGG	CGT	CGC	CAT	GAA	AAT	CCA	CCC	1082
	S	P	M	A	T	I	T	K	I	T	R	R	R	H	E	N	P	P	
1091	CAT	GGA	GCA	AGT	GTG	AAA	GAA	TGG	TTC	AAT	TAT	GTT	ACA	GCT	ACA	AGG	AAT		
	H	G	V	A	S	V	K	E	W	F	N	Y	V	T	A	T	R	N	
1145	GAA	GAG	CTA	AAT	CTG	CTT	CGT	ATT	GTT	GAT	GCT	AAC	AAC	ACT	GAG	AAT	AGC	ACT	1136
	E	E	L	N	L	R	N	V	D	A	N	N	T	T	A	N	S	T	
1199	ACT	GTG	AAG	AAT	TCT	AGT	TTG	TGG	AGT	GGT	AGA	GGA	GGT	TCT	AGC	TAC	AAC		1190
	T	V	K	N	S	S	L	L	S	G	F	R	G	G	S	S	Y	N	
1253	1262	1271	1277	1280	1286	1291	1295	1299	1303	1308	1312	1316	1320	1324	1328	1332	1336	1340	

FIGURE 1C



1307	CAT	GAA	ACA	GAG	ACT	ATC	TTT	GCA	T ^{TA}	CCA	AGG	ATG	CAG	CTT	GAC	TTT	AAA	TCC
H	E	T	E	T	I	F	A	L	P	R	M	Q	L	D	F	K	S	
1316	1325	1334	1343	1352														
1361	ATT	CAT	GTT	CAA	GAA	CCA	CAG	GAG	CCT	TCA	TTA	CAG	GAT	GCC	AGC	CTG	AAG	CCA
I	H	V	Q	E	P	Q	E	P	S	L	Q	D	A	S	L	K	P	
1406	1379	1388	1397	1406														
1415	AAA	GTA	GAA	TGT	AGT	GTG	GTG	ACA	GAG	TTC	ACT	GAC	CAC	ATT	TGT	GTG	ACT	ATG
K	V	E	C	S	V	V	T	E	F	T	D	H	I	C	V	T	M	
1424	1433	1442	1451	1451														
1469	GAT	GCT	GAG	CTC	ATC	ATG	TTT	CTT	CAT	GAT	TTA	GTA	TCA	GCT	TAT	CTT	AAA	GAA
D	A	E	L	I	M	F	L	H	D	L	V	S	A	Y	L	K	E	
1478	1487	1496	1505	1505														
1523	AAA	GAA	AAA	GCC	ATC	TTT	CCA	CCT	CGG	ATT	TTA	TCT	ACT	CGA	CCA	GGA	CAA	AAA
K	E	K	A	I	F	P	P	R	I	L	S	T	R	P	G	Q	K	
1532	1541	1550	1559	1559														
1577	AGT	CCA	ATT	ATT	ATA	CAT	GAC	GAC	AAT	TCC	TCT	GAT	AAA	GAT	AGA	GAA	GAT	AGC
S	P	I	I	I	H	D	D	N	S	S	D	K	D	R	E	D	S	
1586	1595	1604	1613	1622														
1631	ATC	ACT	TAT	ACT	ACT	GTG	GAC	TGG	AGA	GAT	TTT	ATG	TGC	AAT	ACA	TGG	CAC	CTA
I	T	Y	T	T	V	D	W	R	D	F	M	C	N	T	W	H	L	

FIGURE 1D

1685	GAA	CCT	ACT	CTT	AGA	TTA	ATT	TCT	TGG	ACT	GGA	AGA	AAG	ATT	GAT	CCA	GTA	GGT	1730
	E	P	T	L	R	I	S	W	T	G	R	K	I	D	P	V	G		
1739	GTT	GAT	TAT	ATT	CTT	CAA	AAA	TTG	GGC	TTT	CAT	GCT	AGG	ACT	ACT	ATT	CCT		1784
	V	D	Y	I	L	Q	K	L	G	F	H	A	R	T	T	I	P		
1793	AAA	TGG	CTT	CAA	AGA	GGG	GTC	ATG	GAT	CCA	CTG	GAC	AAG	GTT	CTG	TCA	GTT	CTT	1838
	K	W	L	Q	R	G	V	M	D	P	L	D	K	V	L	S	V	L	
1847	ATC	AAA	AAG	CTC	GGT	ACT	GCA	CTA	CAG	GAT	GAA	AAG	GAA	AAG	AAA	GGC	AAA	GAC	1892
	I	K	K	L	G	T	A	L	Q	D	E	K	E	K	K	G	K	D	
1901	AAA	GAA	CAC	TAA	AAA	AGT	AAT	TTG	ATC	TGT	GAA	CAA	ATT	ATG	ATT	GTG	TCT		1946
	K	E	E	H															
1955	GTT	TTA	TTA	CAC	TGG	AGT	GTT	TTT	TTA	GTA	TAA	TTT	GAA	ATA	TAA	CTT	TAA		2000
2009	AAT	AAT	TCT	AAA	TTT	GTG	GCT	ATA	ATT	AAA	AGT	TTG	TAA	GTT	AAC	CTG	TTC	TAG	2054

FIGURE 1E

TRANSLATED FROM FIG.

APR 21 1987
FIG.
CLASS - SUBCLASS
DRAFTSMAN

2063	2072	2081	2090	2099	2108
TTC CAT CAT TCT GTG TAC	AGT GAA GTA TTG CAT GAT AAT	GTA AAT TTT GTG AAA			
2117	2126	2135	2144	2153	2162
AAC TAG ATT AAA ATA TAT AAC	TGC TTG TTA TGG TTT ATA ATT	ATA TAA TGT GCA			
2171	2180	2189	2198	2207	2216
ATA CAA TTC CTG CAT CTT TAA AAT GTC	TGC AGA ATA ACT GTG AAT	TTT TTT GTT			
2225	2234	2243	2252	2261	2270
ATT GGA TTG GCC GTA ACT TTT AGA AAA	AAA TCT TGT TGA TGA TAA TGT GAT TTT				
2279	2288	2297	2306	2315	2324
GGG GAG GTC ATT AAT TGC TTT TTC	TTT AAA TGT AGA CTT ATA TAA ATA CCT				
2333	2342	2351	2360	2369	2378
GTT TGT ATA TAG CTT GAG TAA TTG TGA TAT GAT TGT ATA CCA CTA AAA TAT TGT					
2387	2396	2405	2414	2423	2432
TAA CTA TTA TAA TAA AGT CAC AGT AAT GGT TTA AAA AAG AAA GAA AAA AAA					
AAA AAA A 3'					

AAA AAA A 3'

FIGURE 1F

APP. NO. 54-14141 FIG.
143 SUBCLASS
DRAFTING

5'	GCTTG	AAG	GCG	GGA	AAA	TAC	GGA	ATG	GAG	CAG	GGA	GTG	GAC	GTG	CCC	CAT	GTG
	M		M			M	M	E	R	Q	G	V	D	V	P	H	V
	11	20	29	38	47	56											
	65	74	83	92	101	110											
K	TGC	AAA	GAC	CAG	GAA	CCG	CAG	CCC	TTG	GGG	GAG	AGC	AAG	GAG	CAT	CCG	CGG
C	C	K	D	Q	E	P	Q	P	L	G	E	S	K	E	H	P	R
	119	128	137	146	155	164											
W	TGG	GAA	GAG	AAC	TGC	GAG	GAA	GCT	GGT	GGA	GGG	CCA	GCT	AGT	GCC	AGT	TGC
E	E	N	C	E	E	E	E	A	G	G	G	P	A	S	A	S	C
	173	182	191	200	209	218											
Q	CAG	CTG	ACG	GTC	CTG	GAA	GGG	AAG	TCG	GGA	CTC	TAC	TTC	TCC	TCT	CTG	GAC
L	L	T	V	L	E	G	K	K	S	G	L	Y	F	S	S	L	TCA
	227	236	245	254	263	272											
S	AGC	ATT	GAC	ATC	CTG	CAG	AAG	AGA	GCC	CAG	GAG	CTG	ATC	GAA	ATC	AAC	AAG
I	I	D	I	L	Q	K	R	A	Q	E	L	I	E	N	I	N	K
	281	290	299	308	317	326											
S	AGC	CGG	CAA	AAG	GAC	CAT	GCA	CTC	ATG	ACC	AAC	TTC	AGG	AAC	AGC	CTG	AAG
R	Q	K	D	H	A	L	M	T	N	F	R	N	S	L	K	T	ACC

FIGURE 2A

APPLICANT	SEARCHED
ATTORNEY	INDEXED
ADDRESS	SUBCLASS
DRAFTED	

AAG	GTT	TCG	GAT	CTG	ACA	GAG	AAA	TTA	GAG	GAG	ATG	TAT	CAG	ATT	TAT	AAT	380
K	V	S	D	L	T	E	K	L	E	E	R	I	Y	Q	I	Y	N
335	344	353	362	371													
GAC	CAC	AAC	AAG	ATC	ATC	CAG	GAA	AAG	CTC	CAA	GAG	TTC	ACC	CAG	AAA	ATG	GCA
D	H	N	K	I	I	Q	E	K	L	Q	E	F	T	Q	K	M	A
389	398	407	416	425													
AAG	ATC	AGC	CAT	TTG	GAG	ACA	GAG	CTC	AAA	CAA	GTC	TGC	CAC	AGC	GTG	GAG	ACT
K	I	S	H	L	E	T	E	L	K	Q	V	C	H	S	V	E	T
443	452	461	470	479													
GTG	TAC	AAA	GAC	CTG	TGT	CTC	CAG	CCT	GAG	CAG	AGC	CTA	AGA	CTC	AGA	TGG	GGG
V	Y	K	D	L	C	L	Q	P	E	Q	S	L	R	L	R	W	G
497	506	515	524	533													
CCA	GAC	CAC	TCT	AGG	GGA	AAG	TCC	CCA	CGT	CCC	GGC	AAC	TCA	CAG	CCC	CCA	542
P	D	H	S	R	G	K	S	P	P	R	P	G	N	S	Q	P	P
551	560	569	578	587													
GAC	GTG	TTC	GTT	TCT	TCT	GTG	GCT	GAA	ACT	ACT	TCT	CAG	GCC	ACT	GCT	TCA	GAA
D	V	F	V	S	S	V	A	E	T	T	S	Q	A	T	A	S	E
605	614	623	632	641													

FIGURE 2B

FIGURE 2C

APR 19 1974 FIG.
115, SUBCLASS
DRAFTSMAN

FIGURE 3

APR 20	FIG.
1	CLASS SUBCLASS
DRAFTSMAN	

FIGURE 4 - FIGURE 350

1 M A L S S Q I W A A C L L L L L A S L T S G S V F P Q Q
1 M A L S T R I Q Q A A C L L L L L L - A S L S S G A Y L R Q Q 1642580
700139271

31 T G Q L A E L Q P Q D R A G A R A S W M P M F Q - R R R R R R
30 T R Q T T A L Q P W H G A E S K T D D S A L L M L K R R K R 1642580
700139271

60 D T H F P I C I F C C G C C H R S K C G M C C K T
60 D T N F P I C L F C C K N S S C G I C C I T 1642580
700139271

FIGURE 4